

## Message Text

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16

ACTION ERDA-07

INFO OCT-01 AF-06 EUR-12 IO-10 ISO-00 OES-03 AID-05 CEA-01

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C O N F I D E N T I A L PRETORIA 3248

E.O. 11652: GDS

TAGS: PARM, TECH, SF

SUBJ: DISCUSSIONS BETWEEN PRESIDENT OF SAAEB AND ERDA  
REPRESENTATIVES ON ADHERENCE TO NPT, NUCLEAR ENRICH-  
MENT AND FUTURE PLANS IN NUCLEAR FIELD.

REF: A) STATE 189724 (B) PRETORIA 2801

1. ERDA PHYSICAL SECURITY REVIEW TEAM VISITED SOUTH AFRICAN  
ATOMIC ENERGY BOARD'S (SAAEB) NUCLEAR RESEARCH CENTER AT  
PELINDABA ON 21 AUGUST TO REVIEW SAAEB PHYSICAL SECURITY  
MEASURES RELATED TO PROTECTION OF HIGHLY ENRICHED URANIUM.  
DURING VISIT, ERDA REPS HAD APPROX THREE AND ONE-HALF HOUR  
DISCUSSION WITH DR. ROUX, PRESIDENT OF SAAEB, WHICH COVERED  
TOPICS OF SOUTH AFRICA'S ADHERENCE TO NPT, URANIUM ENRICHMENT  
AND SOUTH AFRICA' FUTURE PLANS IN NUCLEAR FIELD. FOLLOWING  
ARE MAIN POINTS OF DISCUSSION.

2. ROUX RESTATED HIS VIEWS ON SOUTH AFRICA'S ADHERENCE TO NPT  
WHICH CONTAINED IN REFTEL B. HE ADDED, HOWEVER, THAT BEFORE HE  
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WOULD RECOMMEND TO GOVERNMENT THAT SOUTH AFRICA SIGN NPT AGREE-  
MENT, HE WOULD WANT TO SEE A PAPER WHICH STIPULATED INSPECTION

REQUIREMENTS AND PROCEDURES FOR URANIUM ENRICHMENT PLANTS WHICH SAAEB COULD USE AS BASIS FOR NEGOTIATING FINAL INSPECTION AGREEMENT PROVIDING FOR INTERNATIONAL INSPECTION OF SOUTH AFRICA'S URANIUM ENRICHMENT PLANT AND YET PROTECT CRITICAL ELEMENTS IN PROCESS. HE COMMENTED THAT INITIAL PAPER ON INSPECTION REQUIREMENTS AND PROCEDURES NEED NOT BE SPECIFICALLY WRITTEN FOR SOUTH AFRICAN PROCESS, BUT COULD BE SIMILAR PAPER FOR GASEOUS DIFFUSION OR GAS CENTRIFUGE WHICH COULD BE ADOPTED TO SOUTH AFRICAN PROCESS. ONCE WRITTEN AGREEMENT ON INSPECTION REQUIREMENTS AND PROCEDURES REACHED WHICH ACCEPTABLE TO SOUTH AFRICA, IAEA AND TERMS OF NPT, ROUX DEFINITELY IMPLIED THAT HE WOULD THEN RECOMMEND TO GOVERNMENT THAT SOUTH AFRICA SIGN NPT. HE STATED, HOWEVER, THAT HIS RECOMMENDATION WOULD NOT MEAN THAT NPT WOULD AUTOMATICALLY BE SIGNED SINCE DECISION WOULD HAVE TO BE MADE BY GOVERNMENT ON BASIS OF POLITICAL AND POLICY CONSIDERATIONS. ROUX OBSERVED THAT ONE SUCH CONSIDERATION WAS SOUTH AFRICA'S USE OF NUCLEAR DEVICES IN FUTURE PLOWSHARE TYPE PROGRAMS. HE STATED THAT GOVERNMENT IS WORRIED THAT FOR POLITICAL REASONS USG MIGHT NOT GIVE SOUTH AFRICA PEACEFUL NUCLEAR EXPLOSIVE DEVICES, EVEN UNDER COMPLETE USG CONTROL, TO EXPLOIT PEACEFUL USES OF NUCLEAR ENERGY. HE OPINED THAT ONE STIPULATION TO SIGNING NPT MIGHT BE A GUARANTEE THAT USG WOULD GIVE SOUTH AFRICA ACCESS TO PLOWSHARE TYPE SERVICES.

3. DURING DISCUSSIONS ON SOUTH AFRICA'S URANIUM ENRICHMENT PROGRAM, DR. ROUX STATED THAT HIS FINAL RECOMMENDATIONS CONCERNING CONSTRUCTION OF LARGE SCALE URANIUM ENRICHMENT PLANT HAD GONE TO GOVERNMENT THAT DAY (AFTERNOON OF 21 AUGUST). ROUX SAID THAT HE HAD RECOMMENDED IN HIS REPORT THAT SOUTH AFRICA FINANCE CONSTRUCTION OF NEW ENRICHMENT FACILITY ON ITS OWN RATHER THAN IN PARTNERSHIP WITH FOREIGN FIRMS OR GOVERNMENTS AS ORIGINALLY PLANNED. AS RESULT OF LARGE AMOUNT OF CAPITAL REQUIRED TO BUILD NEW ENRICHMENT PLANT AND IN VIEW OF FACT SOUTH AFRICAN GOVERNMENT CURRENTLY INVOLVED IN SEVERAL VERY EXPENSIVE PROJECTS, ROUX SAID HE ALSO RECOMMENDED THAT CAPACITY OF NEW PLANT BE 200-3500 METRIC TONS OF ENRICHED URANIUM PER YEAR RATHER THAN 5000 TONS PER YEAR AS PREVIOUSLY PLANNED. THIS WOULD MEAN A UNIT COST OF PRODUCT INCREASE OF ABOUT 10 PERCENT AND A REDUCTION IN AMOUNT OF ENRICHED URANIUM AVAILABLE  
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FOR EXPORT, BUT ROUX FELT THESE RESULTS ACCEPTABLE. HE ESTIMATED SOUTH AFRICA'S DEMANDS FOR ENRICHED URANIUM BY THE YEAR 2000 TO BE BETWEEN 1000 AND 1500 METRIC TONS, LEAVING VERY LITTLE FOR EXPORT. HE STATED THAT SOUTH AFRICA WILL SELL ITS ENRICHED URANIUM FOR THE SAME PRICE AS THE U.S. AND UNDER IAEA REGULATIONS AND CONTROL.

4. ROUX'S REASON FOR RECOMMENDING TO GOVERNMENT THAT SOUTH AFRICA BUILD NEW ENRICHMENT PLANT ON ITS OWN RATHER THAN IN

PARTNERSHIP WITH STEAG OF GERMANY AND ONE OTHER UNIDENTIFIED COUNTRY WAS THAT BOTH PROSPECTIVE PARTNERS WERE DEMANDING TOO MUCH AND OFFERING TOO LITTLE. HE STATED THAT GERMANS OFFERED MUCH SMALLER CAPITAL CONTRIBUTION TO PROGRAM THAN SOUTH AFRICANS HAD ANTICIPATED AND THAT IN ADDITION GERMANS INSISTED SAAEB GIVE THEM SEPARATIVE ELEMENT TECHNOLOGY IN RETURN FOR INVESTMENT. THESE TERMS WERE UNACCEPTABLE TO ROUX. HE DID NOT GIVE ANY REASON FOR WHY OTHER PARTNER WAS TURNED DOWN. ROUX COMMENTED THAT HE VERY OPTIMISTIC ABOUT NEW PROCESS AND THEREFORE NOT VERY CONCERNED ABOUT HAVING PARTNERS. HE CLAIMED THAT NEW PROCESS AT VERY LEAST IS COMPETITIVE WITH GAS CENTRIFUGE AND GASEOUS DIFFUSION PROCESSES, BUT ADDED THAT IN ORDER TO ACHIEVE MAXIMUM SAVINGS IN INITIAL CAPITAL INVESTMENT AND OPERATION OF PLANT, PLANT MUST BE CONSTRUCTED IN SOUTH AFRICA (ROUX PRESUMABLY REFERRING TO CHEAPER CONSTRUCTION AND OPERATING COSTS RESULTING FROM CHEAP LABOR AND ELECTRICITY IN SOUTH AFRICA). SOUTH AFRICAN GOVERNMENT IS DEFINITELY PROCEEDING WITH PLANS TO BUILD NEW ENRICHMENT FACILITY AND SCALE MODEL OF PLANT IS ALREADY UNDER CONSTRUCTION AT VALINDABA, SITE OF PILOT PLANT NEAR PELINDABA.

5. ON SUBJECT OF NUCLEAR FUEL CYCLE IN GENERAL, ROUX STATED THAT SOUTH AFRICA ALSO PLANNING TO BUILD ITS OWN REACTOR FUEL ELEMENT FABRICATION PLANT IN NEAR FUTURE. THIS WILL ALLOW SOUTH AFRICA TO GO FROM MINED URANIUM ORE ALL THE WAY TO FABRICATION OF REACTOR FUEL ELEMENTS WITHOUT ANY OUTSIDE ASSISTANCE. ONLY PORTION OF FUEL CYCLE FOR WHICH SOUTH AFRICA WOULD BE DEPENDENT ON OUTSIDE ASSISTANCE IS CHEMICAL REPROCESSING OF SPENT FUEL ELEMENTS, WHICH HE STATED THEY HOPE TO HAVE DONE IN U.S. (ROUX STATED THAT TECHNOLOGY FOR REPROCESSING VERY EXPENSIVE AND HE HOPES SOUTH AFRICA WILL NOT HAVE TO INVEST IN SUCH FACILITIES UNTIL ABOUT 1990-95. FOLLOWING COMMENTS BY ERDA REPS CONCERNING  
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SHORTAGE OF REPROCESSING PLANTS IN WORLD AT PRESENT, ROUX CONCLUDED THAT SOUTH AFRICA MIGHT HAVE TO INVEST IN REPROCESSING PLANTS AND TECHNOLOGY MUCH SOONER THAN THEY WOULD LIKE AND SHOULD START LOOKING INTO SUBJECT IMMEDIATELY. HE WAS VERY INTERESTED IN ERDA REP'S SUGGESTION THAT SOUTH AFRICA PARTICIPATE IN A MULTI-NATIONAL REPROCESSING PLANT.

6. MR. THORNE AND MR. HUDGINS OF ERDA TEAM HAD LUNCH WITH DR. ROUX AND SECRETARY OF FOREIGN AFFAIRS BRAND FOURIE ON 23 AUGUST. DURING LUNCH DISCUSSIONS, SUBJECT OF NPT CAME UP AGAIN AND ROUX STATED THAT ONCE URANIUM ENRICHMENT INSPECTION QUESTION SETTLED AND HE HAD AGREEMENT ON INSPECTION IN WRITING TO USE AS LEVERAGE WITH GOVERNMENT, HE WOULD PUSH TO GET NPT RATIFIED. FOURIE AGREED WITH NEED TO SIGN NPT AND SAID HE WOULD SUPPORT MOVE. BOTH MEN SEEMED CONFIDENT THAT ONCE INSPECTION QUESTION SETTLED, SOUTH AFRICA WOULD SIGN NPT.

7. COMMENT: A. ERDA TEAM FOUND ROUX AND OTHER SAAEB OFFICIALS

VERY FORTHCOMING IN ANSWERING QUESTIONS AND GENERALLY MOST  
COOPERATIVE.

B. ROUX AND FOURIE ARE KEY POLICY MAKERS BELOW CABINET LEVEL  
ON SAG NUCLEAR POLICY.  
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## Message Attributes

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